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Electricity on the Farm

January 1928

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Editor—ELECTRICITY ON THE FARM
225 West 34th St., New York City

Electricity on the Farm

Vol. 1 JANUARY 1928 No. 7

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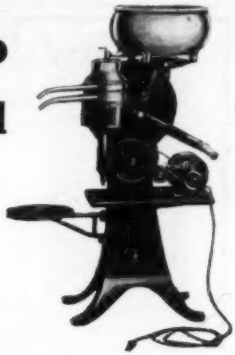

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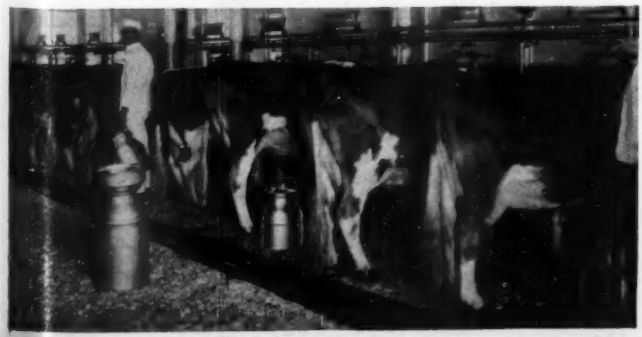

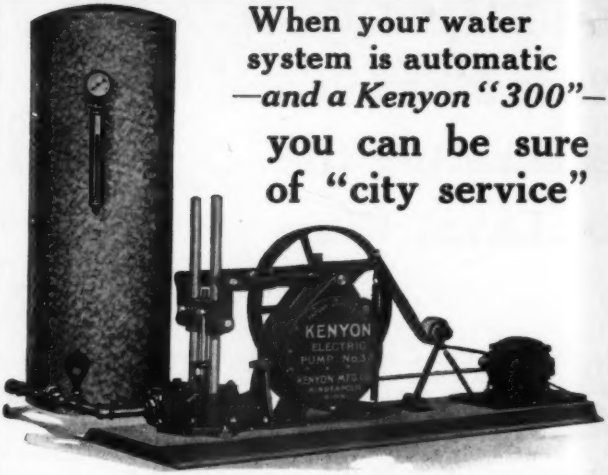

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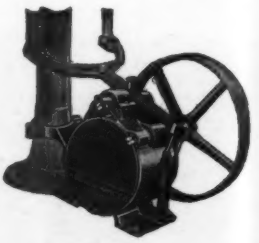

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Electricity on the Farm

Vol. 1 JANUARY 1928 No. 7

"ELECTRICITY makes housework easier and more quickly done. It gives the farm woman more time for the things she wants to do, and that will make her happier. Without electricity time cannot be found to do this. Life is dull if we only have time for the things that must be done."

This is how Mrs. Harry M. Reifsteck of Urbana, Illinois, sums up the advantages of electricity around the household. And it is very concisely stated.

Probably at no other time of the year are the comforts and conveniences of electricity around a farm household as fully appreciated as they are during these short winter days. Electricity makes it possible to complete the house work during the hours of daylight and in addition gives excellent illumination for reading or other recreation during the long evenings. In the article by Mrs. Reifsteck appearing on page 8 of this issue she tells just how she uses electric current and what it accomplishes for her. Probably she is more fortunate than most of the other farm housewives because she employs electricity for all those tasks which it can do more cheaply and more efficiently than she can herself.

It's worth your while to read through Mrs. Reifsteck's article to see just how the general use of electricity around the household brightens up the home, makes more contented people, and brings city conveniences right into the farm household.

Here's How the Color of "Blue Monday" Is Changed

The electric washing machine (with electrically operated wringer) takes the back aches from laundry work. It is thorough, and at the same time, economical to operate.

How Does Electricity Affect Farm Life?

Here's One Progressive Farm Woman Who Knows—and She Tells You Her Experiences

By MRS. HARRY M. REIFSTECK

THE author of this article is well known among those National organizations interested in bringing electricity to the farm. She has appeared before several of them in convention—such as the Agricultural Publishers Association, National Committee on the Relation of Electricity to Agriculture, etc., —to tell them how she uses electricity and what she thinks of it. The Reifsteck farm is located in Illinois, near Urbana.

Does electricity make life better for the woman on the farm? I think the best way of discussing this subject is by giving some of my experiences with electricity and electrical appliances.

Besides the lights, we have an

electric range, refrigerator, separator, washing machine, iron, vacuum cleaner, percolator, toaster, table stove, marcel iron, fan, and egg candler.

First I shall consider the range. From the standpoint of convenience, comfort, cleanliness, safety and dependability, it surpasses anything that I have ever used.

It is always ready, simply turn the switch. What could be more convenient?

Because of the fact that practically no heat escapes, the kitchen is kept cooler in summer than is possible with any other type of range. The housewife will greatly appreciate this fact on hot days when she must or can do a great deal of cooking.

It Is Clean

A strong point in favor of the electric range is its cleanliness. It never smokes or soots. Utensils and units are never black and due to the fact that a large part of the surface of my stove is porcelain enamel it is as easily cleaned as a dish. Also there are no fires to be built, and there is no cob, ash, or coal dust, therefore I do not have to sweep my kitchen as often when using the electric range as formerly. Another thing I noticed was that my walls and woodwork were not as smoked and dirty as in previous years.

It is perfectly safe.

Last, but not least, is its dependability. The temperature is even and reliable. The oven control is wonderful. If bread baking, etc., is successful one time and the same directions are followed the next results will be practically the same.

It enables one to be a better cook because guesswork is done away with. Foods do not require so much water for proper cooking thus the vitamines, flavor and food values are preserved. I have found that meats do not shrink as much in an electric oven as in other types and that they do not require basting, and watching, therefor saving time and labor.

Current Used by Range Depends Upon Operation

I find that the amount of electricity consumed depends to a great extent upon how a person uses the stove. She must be-

Keeping the Carpets Clean

There's always a lot of dust and dirt tracked into the farm home, but the vacuum cleaner does its work and gives the farm woman just as bright and clean carpets as are found in city homes.

come skilled in its use in order to have the highest degree of success in conserving current. Menus should be planned so that a great many of the meals can be prepared in the oven. I have found that the cost of preparing food in this way is reduced often as much as one-half. However, this depends upon the kind, and amount of food.

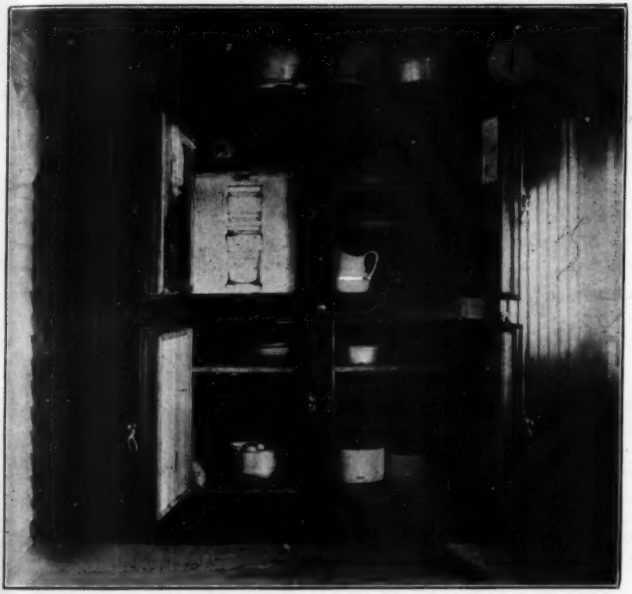
Electric Refrigerator Desirable

The electric refrigerator is especially desirable in the country. One reason why we had never gotten an ordinary refrigerator was because of the ice problem. It is a nuisance to have to go after it several times a week especially when the farmer is busy.

Some of the advantages of electric refrigeration are: The air is cold and dry and food will keep longer than in a damp atmosphere. The temperature can be maintained at the desired number of degrees and lower than is possible with ice which results in the saving of foods

The Electric Ironer — Fast and Efficient

Once the electric ironer is used, it is always used. Contrary to rumors, it does not injure buttons but gives finely finished work in quick time.



A Big Food Saver on the Farm

The electric refrigerator keeps food from spoiling by keeping it chilled. Some farm women now prepare dishes and sometimes even meals a day ahead of time.

that would have to be thrown out if there were no refrigeration in the home.

One thing that I like about my refrigerator is that cream can be put into it. We keep our cream sweet until ready to deliver it thus getting a better price. The butter is always firm and I usually keep some of my eggs in the box, because when cold they will beat up much nicer and quicker.

Another point greatly in favor of the electric refrigerator is that frozen desserts, ices, salads, etc., may be made with very little labor. Ice cream is delivered to the city housewife when she wants it but not so in rural districts. As a rule the farmer's wife does without, but if she has the up-to-the minute refrigerator the solution is simple. For instance, when I want a frozen dessert, I mix it. put it into the box and forget about it until meal time. Ice cubes are always ready to use in drinks.

Before proceeding I would like to give some of the ways in

which I have correlated the uses of my range and refrigerator. Probably very busy women with large families may get more satisfaction out of doing so than myself. Last summer I tried to save time, labor and trouble by cooking quantities of meat, vegetables, etc., in my electric oven at once, putting them into the refrigerator and using when wanted in cold dishes, patties, salads, casseroles, hash, stews, etc.

Electric Separator

I shall not say a great deal about the electric separator because I do not consider it as part of my equipment, but it is certainly fine for the woman who does the separating because it eliminates the hard task of turning. When using it the cream usually tests the same and the amount of current used is very light.

Washing Machine the Choice

I have been asked, "What piece of equipment would you keep if you only could have one choice?" That seemed difficult to answer after using all of these appliances, but after a great deal of thought, I believe I would decide in favor of the washing machine. My answer may appear funny to some people. In fact I know that some of my neighbors on our line would prefer other things.

My reasons are, first, I have always considered washing as my most difficult task and it only seems logical that some kind of power should be used. About the only other kind available, on the farm is the gasoline engine. This is good, but I consider the use of electricity superior to it. For instance, the engine stops sometimes. Then it has to be cranked and often it is too hard for me to crank it. (I would much rather do my washing by hand.) If the engine cannot be started much time must be spent in finding someone who can start it or in finishing the washing by the primitive method.

My washer is very efficient, easily kept clean, has all of the parts enclosed, has never gotten out of order and consumes very little energy. I would like to

(*Continued on page 24*)

The Separator Saves Time

Few electrified farm appliances save as much time and labor at such a small cost as does the motor driven separator. That's why it's so popular on up-to-date farms.

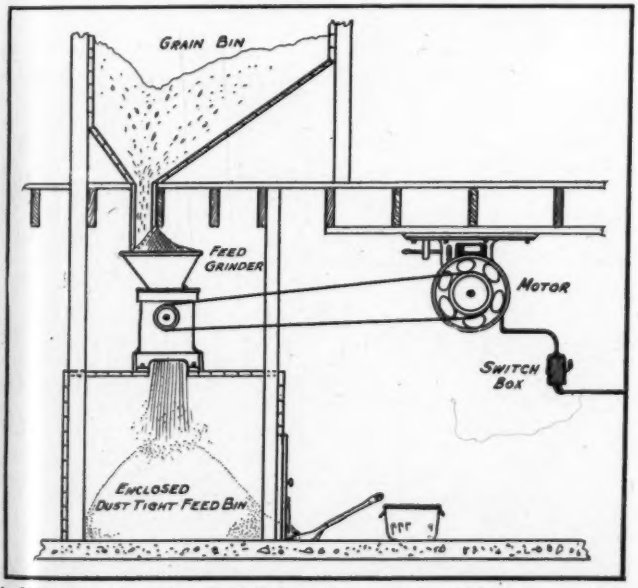
Feed Grinding With Five Horsepower

By E. R. & V. B. MEACHAM

A NEW type of mill has appeared among farm feed grinders. It is small enough to run with a 5 H. P. motor, but large enough to deliver from 400 to 700 pounds of medium ground oats in an hour.

The Hammer Type

It is the hammer mill. It operates on the same principle as the common limestone pulverizers and some of the larger mills that handle custom grinding. It runs much faster than most farm machinery,—from 1700 to 4000 R. P. M.,—because it must beat the grain to pieces by the terrific speed of its hammers. This high speed makes the new mills particularly appropriate for electric drive, but they can be run with a gasolene engine if it is fitted with



A Mill Set Up Like This Takes Care of the Grinding, without Attention

a pulley large enough to give the proper speed.

Two mills of this type are on the market for about $60.00. If they are fitted with blowers to elevate the grain, they cost about $20.00 more.

These small mills do not pretend to compete with the large tractor driven mills in capacity; their advantage lies in their low operation cost and the fact that they can be run without attention.

Performance of Mills

When oats, which take more power for a given weight than other grains, are ground to medium fineness for dairy cows, these mills will use from 15 to 25 kilowatt hours a ton. If the power costs from three to five cents a kilowatt hour, the cost of grinding ranges from 45c to $1.25 a ton. Shelled corn,—the feeding mechanism of these mills will not take care of ear corn,—can be ground at the rate of 1000 to 2000 pounds an hour. It is quite possible to crack a ton of corn for ten cents worth of electricty.

They can be made nearly automatic in their operation because their grinding is done by rapidly whirling beaters, and there are no grinding plates to be ruined by rubbing together if the hopper should run empty, nor are they harmed by screws, nails or pebbles passing through them.

"I turn the mill on while I am choring around the barn," a farmer told me the other day, "and I never have had any trouble with it. I wouldn't want to go off to town and leave it running, but if I'm working somewhere around I'd hear if anything went wrong. I'm out in the barns enough to get plenty of grinding done."

Set Up

Making the mill take care of its own job is a question of proper installation. Where the grain bins are on the second floor of the barn, and stock is fed below, it is advantageous to mount the mill close to the ceiling of the first floor. George Tabbert, of Ripon, Wisconsin, has such an arrangement. He bolted his mill securely to the concrete wall of an empty stall. The motor is mounted high enough to keep the belt up out of the way. The grain is in bins directly above the mill, and drops down through a chute into the hopper. The ground feed falls into the stall beneath the mill. It is tightly boxed in so the fine dust from the feed will not escape into the barn.

Mill Runs Unattended

Mr. Tabbert lets the mill run while he is working about the barn, and even while he goes in to breakfast. He never has to touch the grain until it comes out, practically in the feed alley, ready for his cattle.

Mr. George Plenty of Poynette, Wisconsin, makes his mill feed itself in the same way. But it is placed in the basement of the granary instead of the barn. It stands on a platform raised from the floor to make a bin for

the meal. The sides are tightly enclosed with sheet metal.

Delivering the Meal

On many farms the grain is ground in the granary but fed in the barn. Wherever it is not convenient to provide ample storage space for the meal directly below the mill, some sort of elevator is necessary. These new hammer mills have blowers to carry the grain away.

The blowers do consume some power, but they also suck the meal through the screen, help-

Mr. Plenty Set His Mill below the Bins in the Granary

ing to keep it clear, so they actually increase the capacity of the mill. They will deliver the ground feed through four or five inch sheet metal pipe for a considerable distance in any direction,—around a corner if necessary. The mill may be in the granary, but if the barn is not too far away, it will deliver the meal in the feed alley.

High Speed

Because of their tremendous speed, these mills must be rigidly bolted to a solid, immovable base to keep them from vibrating. If they shake around, they will injure themselves, and the bearings of the motor that drives them.

This high speed demands big driving pulleys; and they in turn mean a high belt speed. The pulleys should never be less than six inches in diameter. The belt should be thin and flexible to make good pulley contact, and should be endless. If it must be laced, the joint should be as flat as possible to keep it from pounding on the pulley.

Saves Time and Labor

The farmer who grinds at home saves the time and labor of sacking and hauling the grain. Before he got his mill, Mr. Homer Dopp, of Waukesha, Wisconsin, used to sack his oats on the haymow floor and lower them to the wagon. Then he hauled them two miles to town. If the mill was busy, he left the oats and made a second trip after them. Then, after he got them home, he lifted them back to the haymow floor where he mixed the cattle feed.

There is almost no work to the regular grinding where the mill is set up to receive the grain from the bin and deliver it where it is fed. Even if it is not possible to make the operation of the mill take care of itself, the labor it requires is undoubtedly less than that of sacking the grain to take to town.

Many farmers think that the cows like freshly ground feed better than the other, and therefore consider it better for them. Daily or weekly grinding keeps a fresh supply on hand with never any danger of moldy feed.

Ironers Suitable for Farm Use

The ironing machine is likely to be as important in the farm home as in the city, due to the greater amount of washing and ironing which is done. The use of this machine almost eliminates the flat iron. Much less time is required and practically everything may be ironed. The small house size machines, having a 30-inch to 36-inch roll with an open or semi-open end are preferred on account of their compact size and improved operating features. The desirability of ironers lies in the lessening of fatigue, increasing the pleasure of the work, shortening the time of operation and increasing the quantity of material ironed.

Soldering on the Farm with Electricity

BY J. E. WAGGONER

THE accompanying illustrations show Mr. M. T. Thurmond of Rhome, Texas, using the electric soldering iron on his farm. He is very enthusiastic about the electric soldering iron and does all kinds of mending with it. Here are his own words about it:

"Before I had my place wired for electricity the only means that I had for heating a soldering iron was my wood stove. This was decidedly unsatisfactory as it took a long time for heating and it was difficult to keep the iron hot. Since I have been using the electric soldering iron I have been able to do much better work in soldering."

The electric soldering iron has many advantages over the old method of soldering. It means a quick heat and a clean iron. As the temperature remains the same with the electric soldering iron a much smoother job can be done. The iron does not oxidate as fast as it does with other heating. Different sizes of tips that screw on the end of the iron enables one to do light and heavy jobs.

Mr. Thurmond has also built his own radio. He says:

The Electric Soldering Iron Is Safe, as Well as Efficient. No Danger of "Gas" Exploding Where It Is Used

The Electric Soldering Iron Is Best, for It Puts the Heat Right Where You Want It and Keeps It There Continuously

"I found the electric soldering iron more than satisfactory in making my radio. It would have been almost impossible for me to have done this work with the regular soldering iron heated the old way. This was a delicate job and a small hot iron was needed."

Many Uses

There are many occasions on the farm where soldering can be done by electricity if the current is available. Soldering by this means is economical and saves both time and money. The soldering of milk pails, dippers, kitchen utensils, metal roofs, radiators and other repair jobs is often necessary.

To do these jobs it is essential that the farmer have some knowledge of the rudiments of soldering. The key to good soldering is a clean metal and the use of the correct flux. Some of the useful fluxes are muriatic acid, zinc chloride, resin, salamoniac and soldering pastes.

Types of Solder

There is a solder known as acid core solder which comes in the form of wire or ribbon. It contains the flux within the solder. This solder may be used very satisfactorily on the farm where the electric soldering iron is handy. The surface to be mended should be clean and the solder applied with a hot iron.

Making Matters Worse

Officer: "What do you mean by going sixty miles an hour through this town?"

Husband: "Why, you—*—*—*—*—!—*—!—!"

Wife (helpfully): "Don't pay any attention to him, officer. He's intoxicated."

Chickens Like Heated Water in Winter. They Drink More of It.

Electric Water Heaters for Poultry

Saves Labor in Cold Weather; Some Interesting Details of Western Experiments

THE past winter George W. Kable and F. E. Fox of the Oregon State Agricultural College Experiment Station and the Oregon Committee on the Relation of Electricity to Agriculture respectively, conducted tests to determine the results of electric water heaters for poultry.

In the following paragraphs is given the substance of what they found.

Poultrymen who are making a business of egg production are always on the lookout for methods of increasing the monthly profits. A number of Oregon poultrymen, with this in mind, have been experimenting for several years with various means of warming the drinking water for their flocks during the cold days of winter. Heaters were tried with varying degrees of success. In

response to a number of requests for information on the subject, an investigation was undertaken by the Experiment Station co-operating with the Oregon committee.

Heaters Tried at Low Temperatures

The heaters tested were tried under cold weather conditions. The original purpose of the investigation was to find heaters which offered promise and then test these out in the laboratory. The tests were first made in a refrigerated room where the temperature could be held at 20° below zero. Then the heaters were taken out into the laying houses and given a practical test during the cold weather of January and February. While making these latter tests the conductors were also able to get some information on the amount of water hens will drink when it is warm and when it is cold.

Pullets Drink More Warm Water

In testing out the heaters under house conditions, four flocks of 115 leghorn pullets each, were used. Two of the flocks were given warm water and two were given water at tap temperature. During the 40 days of the test there were two days when the temperature remained below the freezing point all day. On these days the heated pans were free from ice at all times, while the unheated pans were frozen over during the early morning hours before the poultryman arrived. The increase in the amount of warmed water over cold water consumed during these cold days was quite marked, being 25.4 per cent.

Heaters Save Labor

Not the least advantage in heating of water during freezing weather is the saving of labor. When a small amount of heat is applied continuously to the water, it never freezes, and it saves the time and trouble of heating and carrying water.

Two Types of Heaters Available

There are two general types of heaters on the market. "Clamp-on" and other external heaters heat the water from the outside of the container in much the same manner as a small stove. Three styles of external heaters are shown in one of the illustrations herewith.

Immersion heaters are placed directly in the water. Four styles of immersion heaters are also illustrated herewith.

Merits of the Different Types

The immersion units may be used in open top containers regardless of material or shape, such as wood troughs, pails, pans or earthenware jars. Since the heater is immersed in the water all of the heat is transferred to the water. It is always ready to use by plugging into a lamp socket and it may be easily removed for cleaning the container. It should be noted here that this type of unit burns out quickly if the pan becomes empty or if the

heater is accidentally displaced from the water while the current is on. The cost of the units is more than for external heaters, and because of their shorter life they cannot be recommended by the Oregon Committee from a comparative economic standpoint.

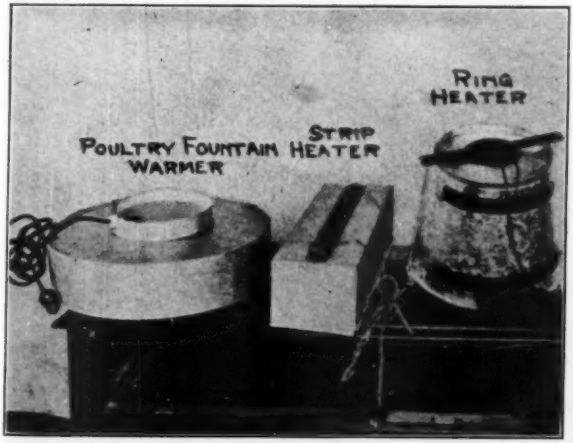
External Heaters

External heaters are relatively easy to apply to most metal containers; they will not burn out if the pan becomes empty; fowls will not displace them; the cost is comparatively low and the better styles are efficient heaters.

If "clamp-on" heaters are placed on the bottom of a pan, they interfere with placing the pan on a flat surface and some other means of support such as a slotted frame or board with holes cut in it must be provided. The heaters should be kept away from inflammable materials for the sake of safety from possible fire.

Size of Heater to Use

When starting this investigation the requirements set down for the satisfactory heater were that it should be simple, inexpensive, easy to apply, low in operating cost, and should keep the water from freezing without overheating it. Thermostatically controlled (temperature controlled) heaters were eliminated because of the first high cost and complexity. In order to meet the above requirements, especially in regard to temperature, the test indicated that heaters of the following sizes should be used.



Some Types of "Clamp-on" Heaters Used for Heating Water for Poultry in Winter.

For winter temperatures ranging between 15° below zero to 40° above:

80 to 100 watts for a two-gallon container.

120 to 150 watts for a three-gallon container.

160 to 200 watts for a four-gallon container.

For localities where the winter temperatures range between zero and 50° Fahr:

60 to 75 watts for a two-gallon container.

80 to 100 watts for a three-gallon container.

120 to 150 watts for a four-gallon container.

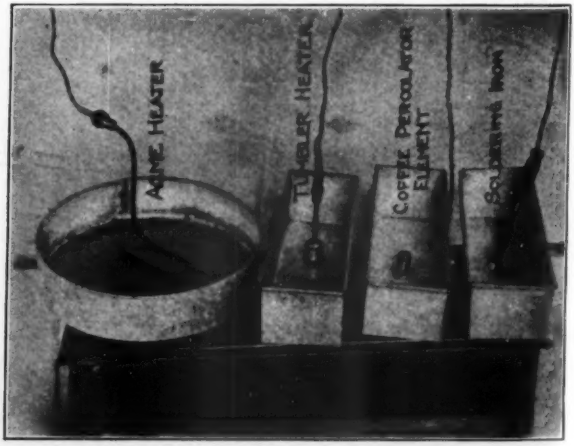
The above capacities are an approximate guide only. The temperature of the water will depend upon the size and shape of the container, its insulation against cold, its location, and the temperature of the poultry house, as well as on the wattage of the heater.

Boxing the containers closely with one-inch boards conserves enough heat so that the above standards may be decreased 25%. If insulated with two inches of shavings the decrease will be 40%.

Small Heaters on Large Pans

It is not necessary to have heaters of large dimensions to use on pans of large size; nor is it necessary to place the heater in the center of the pan to warm the water uniformly. A small heating element placed in the bottom of a long pan will heat the water at the opposite end or side as warm as that adjacent to the heater.

The ring heater shown in the illustration elsewhere is perhaps



Four Types of Immersion Water Heaters Used by Poultrymen.

the most satisfactory unit which was tested. It is flat and may be wired to the container or fastened with a piece of scrap iron as shown in the illustration. The single heat, 3-inch size which the committee tested out costs in the neighborhood of $3.00.

The Acme Heater

The Acme heater is a very satisfactory heater of the immersion type. Heaters of this kind are not now on the market but may be purchased from manufacturers on special order. The heating part of the unit should rest on or close to the bottom of the pan and be heavy enough to be stable. The handle may be made to hook over the rim of the container or it may be made long enough to extend above the water in the deepest container which will be used. Such a unit may cost in the neighborhood of $4.00.

The Soldering Iron

Hermetically sealed soldering irons make very convenient water heaters in addition to being useful for soldering. Only hermetically sealed irons may be immersed in water. The cost of such irons is from six to ten dollars each, which may be too high for general use.

The strip heater is similar to the ring heater except in shape. Because of its greater exposure to the atmosphere it did not heat the water as efficiently as the ring element.

Tumbler heaters will heat the water efficiently if they can be secured in sufficiently low wattage and held in place in the container. They retail at around $6.00 each.

Coffee percolator elements are suitable only for permanent installations. They are small, efficient, and not in the way, but they must be fastened permanently to the water pan by an electrician.

Summary of Test Results

Pullets drank 25.4 per cent more warmed water than cold water during freezing weather.

Water consumption was increased 5 per cent per pullet and 4.2 per cent per hundred eggs laid by warming it during average Western Oregon winter weather. Temperatures were above freezing 90 per cent of the time.

White leghorn pullets laying at the average rate of approximately 60 per cent in midwinter drank 0.26 pound of water per pullet per day and 44 pounds of water per 100 eggs laid.

Drinking water for poultry may be conveniently warmed with several styles of simple electric heaters at a cost about the same as for lighting two electric lamps.

Heaters of 75 to 100 watts capacity are about right for warming two gallons of water.

A 3-inch "clamp-on" heater can be purchased for about $3. It would last indefinitely.

Specially constructed heaters to be immersed in the water can be secured for about $4.00.

In case of emergency a hermetically sealed electric soldering iron makes an excellent water heater.

Electric lamps may be used for water heating if they are supported close to the under side of the pan and both the pan and lamps protected to avoid heat losses.

How Does Electricity Affect Farm Life?

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say here that the current has not gone off but once since I have been using my washer and that was for about ten minutes.

Next comes the iron. It is more convenient than the ordinary kind, because it saves time and labor. It seems to me that the ironing machine is replacing the iron because clothes can be ironed much faster and easier with it and it is possible for the person to sit while doing the work.

I have heard that the two pieces of electrical equipment most popular are the washer and the vacuum cleaner and I am inclined to believe that. The cleaner is especially helpful in the country where so much dust and dirt are tracked in. Besides lessening the time of cleaning, it reduces the wear on the

The Electric Range Bakes Better Bread

Its temperature is always within absolute control, and you know that it will take the same time to bake bread on each occasion. Better cooked food with far less attention is characteristic of the electric range.

rugs. However, I find I can make hard work of using it if I attempt to run it too swiftly over the floor, making it not only bad for me but for the appliance. Since using my vacuum cleaner dusting is reduced to a minimum; the rugs never have to be beaten, and heavy draperies and portieres can be cleaned while hanging in place.

After the baby chicks are taken from the incubators, there is always dust and fine down left in them. Cleaning out has been difficult because it flies over everything. We do it very easily with our cleaner.

Fan Much Appreciated

Another appliance that I value is my fan. Sometimes I use it to help dry my clothes when they must be hung in the house; also to cool kitchen in summer when I am very busy, besides the common uses. After each hatch we disinfect our incubators and thoroughly air them. This year in order to hasten the process and remove the odor of the formaldehyde the electric fan was placed in front of each one for about a half hour.

The table stove, toaster and percolator are all good and make the preparing and serving of meals much pleasanter.

I have pointed out the advantages and disadvantages of my equipment, and know that the good points far outnumber the bad so, of course, electricity makes farm life better. Just how does it do this? First it makes the work easier and secondly it lessens the time of doing it.

Electrical equipment alone will not make the work easier or a home convenient. This depends to a great extent upon the person using the appliances and her arrangement of them. One reason why I think that I have gained so much satisfaction and good from mine is because my service rooms are adjoining. For instance, my laundry is directly off the kitchen and in it are my washer, ironing equipment, separator and refrigerator. The latter is just inside the room. It would be in the kitchen if I had space for it, but this arrangement is practically as convenient.

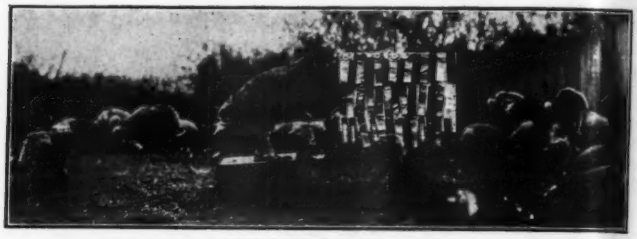
A woman must exercise a certain amount of reason in using her equipment. She must realize that she will have to do the thinking.

The machines, etc., are her slaves and will do the work well, but must have her cooperation. Of course if they are scattered the work cannot be accomplished as quickly and with as much ease as if they are close together.

Efficiency in Working

For example, on washday, I heat the wash water, while preparing breakfast. By the time the meal is finished the water is ready. I start the washer, then take care of the separator and dishes while the first batch is washing. The fact that I take such a few steps in going from laundry to kitchen makes it pos-

(*Continued on Page* 28)



Some of the Turkeys That Were Raised Under the Electric Underheat Brooder, on Mrs. P. J. Wiezrek's Turkey Farm, at Tukwila, Washington.

Raising Turkeys with an Electric Brooder

By J. C. SCOTT

IT has been generally believed that turkeys would not thrive satisfactorily in localities exposed to moist sea air, but the experience of one turkey raiser in Washington state, as described by Mr. J. C. Scott, shows otherwise.

A finer flock of turkeys than that on Mrs. P. J. Wiezrek's farm, at Tukwila, Washington, would be hard to find. And part of them were brooded under an Electric Underheat Brooder.

As we stood watching some three or four hundred of her turkeys, Mrs. Wiezrek said: "I can't tell the ones raised with the electric brooder and those raised under the turkey hens apart now; but the electric hover eliminates much work in brooding season.

"The thing I like about the electric underheat brooder is that the turkeys have warm, dry feet. I put 375 turkeys under a 500 chick brooder, which is about the right number for turkeys. They grew fast. The brooder is a success for raising turkeys."

Mrs. Wiezrek has been raising Mammoth Bronze turkeys for ten years, and has won many prizes at Western Fairs and shows. The production and sale of breeding stock is her specialty.

One often hears that turkeys cannot be successfully raised in the Puget Sound country, because of dampness, but from appearances around Mrs. Wiezrek's farm, which is a short way out of Seattle, it is one of the best places out-of-doors to raise them.

Flooded Farm At Northampton, Mass.

Here the dependability of Central Station Electric Service was well demonstrated. Electric lights, which burned without interruption, enabled the owner to remove all his stock after dark.

Electric Service Proves Its Dependability

Recent New England Floods Were Not Able to Deprive Farms of Electricity

By R. E. PIERCE

THE disastrous floods which occurred in the New England states in November proved one thing most conclusively: that central station electric service is dependable under most adverse conditions. In the following article Mr. R. E. Pierce tells how the electric service aided in rescue work:

The farms in the flooded area at Northampton and other western Mass. towns and cities were fortunate in retaining their electric light service. Some of the plants and distribution systems were kept in full service by only the narrowest margin. In many cases plants and lines were kept in operation by the employees of the light companies working in water to jack up transformers and guy poles, etc. In many places the water was within four

feet of high tension wires and secondary lines. Those who took part in the active rescue work state that had it not been for electric service on some of the farms it would have been impossible to remove all of the stock which was brought to safety with the aid of the electric lights in the barns. and cattle sheds. It would not have been safe to use lanterns in this rescue work due to fact that in many instances the men were obliged to crawl on their hands and knees to reach the stalls of the live stock and a lantern would greatly hinder the rescue work.

Electric Lights Help

Before the occupants were obliged to vacate their homes and leave for higher lands the electric lights in the houses furnished light which enabled the farmer to remove to safety many of his household effects.

When the waters receded again electricity played an important part, for the farmers who had the electric pumps were the first to have dry houses and barns.

Paid for Itself

Is it worth far more than the small sum it cost? Beyond question electricity saved the farmers many thousands of dollars during this flood. A sudden emergency calls for light in the dead of night. You press a button and you have your light. No lanterns to tip over during the exciting moments to follow.

How Does Electricity Affect Farm Life?

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sible for me to do my morning's work at the same time the clothes are being washed.

Now, if electricity makes housework easier and more quickly done it gives the farm woman more time for the things that she wants to do, and that will make her happier. Without electricity time cannot be found to do them. Life is dull if we only have time for the things that must be done.

She can take an interest and active part in outside affairs, club, church, etc., improve her mind and personal appearance and spend many more hours with her family. Her outlook on life is broadened. She will be a better homemaker and mother because of this.

If we make our women happier and satisfied we have accomplished a great deal because the conditions of our homes depend upon them and the homes are the bulwark of the nation.

It is possible for one to be a good housekeeper, but not a good homemaker. There is quite a difference in the meaning of those two words. I would much rather that people said I was a good homemaker than merely a good housekeeper, but electricity gives us time for both.

Padre: "Do you take this woman for butter or for wurst?"
Harde: "Oh, liver alone. I never sausage nerve!"

* * *

Household Hints

Some Timely and Interesting Suggestions of Value to the Farm Housewife.

Making Sandwiches

By STELLA ELIZABETH DELAND

If you have an electric toaster and a grill you can make not only very delicious sandwiches for quick luncheons, but sandwiches that will be just as wholesome and nutritious as many of the luncheon dishes that take much longer to prepare and cost a great deal. Here are several of my favorites:

Hot and Cold No. 1

Broil the necessary amount of bacon in the lower compartment of your electric grill and, while this is cooking, toast slices of bread about one-quarter inch thick. Use the dry toast and arrange on the under piece one or two lettuce leaves and two thin slices of tomato; spread this over with mayonnaise and place two crisp slices of bacon on that and top with another piece of dry toast. Or if you wish to make a still thicker sandwich use another lettuce leaf on top of the bacon.

Hot and Cold No. 2

Toast your under slices of bread only on one side. Place a slice of domestic cheese, about one-quarter inch thick, on the untoasted side of the bread, and over it spread two slices of uncooked bacon. Place this in the toasting compartment of your grill and let the bacon cook. When it is brown and crisp, and the cheese has begun to melt, remove it from under the heat, place a slice of tomato over it and top with another piece of toasted bread.

Cold Toasted Sandwich

Take a little piece of left-over ham and chop fine, add to it a tablespoonful of chili sauce and one of mustard sauce, or mild prepared mustard. Make your toast in the electric toaster at the table—spread with ham mixture, place a lettuce leaf on top of that and the second piece of toast. This need not be buttered unless you desire.

The same filling can be made from almost any small piece of left-over meat.

MAKING HIS LOAD LIGHTER

Ferguson in Chicago Daily Drovers Journal

Yes, electricity does make the farmer's load lighter. Why not the farm housewife as well?

Radio Notes

Static Unavoidable

It is always a disappointment to the purchaser of a new radio set to find that at times he is bothered very much with static—the crackling noise common to all radio sets, and particularly when there is an electrical disturbance in the air.

Unfortunately, static is unavoidable. Even the U. S. Bureau of Standards acknowledges this. While the actual time which static interferes with reception is small, still it does destroy an occasional program. There is no cure for it.

But it is possible to reduce it in many instances to a point where it will not seriously interfere with reception. Static comes from a definite direction. If the program you wish to receive is not from a station in the same direction, the static can be largely eliminated. The best direction of reception may be found if you have a loop as the pick-up device. An insulated, underground antenna cuts down the static of the radio and so does an indoor aerial strung in the attic or around walls of the room.

Choosing Your Radio

Among the many points which should be considered when purchasing a new radio, two stand out with predominating importance. These are: the selectivity and tone quality.

When radio sets were first placed on the market the tendency seemed to be to buy those which had the greatest ability to pick up distance irrespective of the quality of the reception.

After the craze for distance had passed over, then it seemed to be that volume of sound was the feature which attracted most people. As a result sets were purchased on the basis of the noise they could make with a result that quality was again sacrificed and poor reception was the rule rather than the exception.

Then the trend turned toward selectivity—the set being able to pick out its station clearly from the great number on the air was the one which was chosen. But selectivity alone is not the predominating factor. Quality of reception is of equal importance. A set which has high selectivity and good tone reproduction is the one which will stand the acid test of service and which will be able to show the longest period of usefulness.

Housewife—"We are going to get an electric washer, so we won't need you any more."

Laundress—"All right, lady, but an electric washer don't give you no gossip."

QUESTIONS AND ANSWERS

Pure Milk and Milkers

Question: Can as pure milk be secured by the use of the milking machine as by hand?

Answer: This all depends upon the care exercised in properly cleaning and sterilizing the milking machines. Where the machine is thoroughly cleaned and sterilized after each milking it is likely that purer milk may be secured by the machine. On the other hand, if the machine is not properly cleaned there is a very great likelihood that milk from this machine will contain more bacteria than that secured by hand milking. It is entirely a question of care exercised in properly cleaning the machine and sterilizing it after each milking.

Slip of Induction Motors

Question: Will you please advise me what is meant by "slip" in connection with A. C. motors?

Answer: The slip (or speed reduction), is the percentage drop in speed between no load and full load, based on the maximum speed. The slip at full load is usually about 5 to 7 per cent. At other loads it is approximately proportional to the load, therefore, at twice full load the drop in speed will be approximately 10 to 15 per cent.

When the Motor Stops

An induction motor usually stops at from 2 to 4 times the full load rating. In other words, if the load on the motor reaches a point where it is more than double what it should be, the motor will probably stop. Bear in mind, however, that no motor should be run at a load greater than that specified on the name plate. The rating of a motor is so determined that the motor will operate at its best efficiency and least injury to itself at the load specified. The fact that an induction motor will not stop until it is overloaded 100 per cent, does not mean that a motor can carry this load safely. Excessive heating usually results and serious injury may develop by this practice.

Readers of "Electricity on the Farm" are invited to submit questions for answering in the columns of this magazine. Questions should be confined to electrical subjects and be addressed to "Questions and Answers Department, Electricity on the Farm, 225 West 34th Street, New York, N. Y."

Sparks and Chaff

A Mosquito Cure

A farmer in Ohio was recently honored by the presence of a plantation owner from the back woods of Kentucky. Accompanying the Kentucky gentleman was his own "valet," a young colored boy. The visitor was invited to make his quarters in the guest room in the Ohio farm home. Upon his arrival the young colored boy was approached by the farmer who said:

"Unfortunately we have no screens in the house yet and I am afraid that your master will feel the mosquitoes tonight. You had better look out for him."

"Don't yo' all worry 'bout de ol' man, boss, said the colored boy. "The fust part of the night he will be so drunk that he won't notice 'em and the las' part of the night they will be too drunk to bother him."

"I'll stick to you whate're betide,
Though all the world may scoff."
Thus spoke the heavy flannel shirt,
But the man said, "Aw, come off!"

* * *

A newly settled farmer left his farm home in his car enroute to the county fair.

But he came to crossroads where road repairs were being made, and did not know which way to turn. He felt in his pocket for a match. He found but one. Climbing to the top of the pole, he lit the match and in the glimmer read "Wet Paint."

* * *

A Belgian scientist says the proper use of nitrates will eventually enable the farmers to do their planting one week and harvest the crop the next. This would leave them fifty weeks for following up their congressmen to get them to live up to their pre-election promises.

Down on the Farm

By Isabelle M. Horn

"How are you gonna keep 'em there?"
That question's bothered me, for fair!
Too much drudg'ry, too much work;
Who can blame the kids that shirk?
But it's diff'rent now, I'm telling you,—
Jest since those power lines came through.

This little pump, so strong and trim,
Means no more totin' pails for Jim;
Here's Ma's iron and percolator,—
She's harpin' now for a 'frigerator
Which don't need ice, 'cause it runs on "juice",—
Electric power's sure raised the deuce!

Sis curls her hair with this,—some class!
Push that button for a bit of jazz;
Out there's th' workshop,—ev'ry night
The boys are busy since we've lots o' light.
Whole fam'ly's happy,—no time to get blue,—
We're livin' since those power lines came through!